Valerio Dalla Costa

Bitcoin Village

THE DAWN OF A NEW SOCIETY

based on sound money

In collaboration with



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To Roberto

Dad, even if you've never actually been a big reader, you'll be flipping through the book from up there... right?

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FOREWORD

In these pages, Valerio Dalla Costa manages to satisfy the demands for knowledge related to Bitcoin technology that the general public solicits from the most experienced individuals. The absence of a book capable of covering the entire spectrum of questions that were asked of him firsthand prompted him to undertake the task of providing the necessary answers in a captivating narrative that could clearly explain the origins of the technology, its evolution, its proper use, and last but not least, its incredible potential to radically change the society we live in.

Few people know it, but Bitcoin has elegantly intertwined four specific areas of knowledge: cryptography, distributed computer systems, game theory, and monetary theory. These topics are certainly complex on their own, but the author has managed to present them with extreme clarity and the right level of depth for anyone outside the field interested in understanding and consciously using the technology.

Even someone like myself, who has been involved with Bitcoin for a long time but is not a programmer or a technical expert in the field, will find great value in *Bitcoin Village*. The Dawn of a New Society based on Sound Money.

In these pages, which I personally read in just two days, Valerio Dalla Costa manages to go beyond the technical issues, historical events, legitimate doubts, inevitable curiosities, and delicate topics such as privacy and freedom.

In his conclusions, the author also presents compelling considerations and important reflections on the possible socio-political and economic changes now inextricably linked to the presence of this revolutionary technology, leaving us even more curious about a near future that is not simply waiting for us, but depends on us and our actions.

Francesco Carbone¹
December 2022

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¹ Francesco Carbone worked in the financial markets for 20 years, first as a broker and then as a financial consultant. Since 2013, he has focused mainly on cryptocurrencies trading and teaching economics using the Austrian School approach. In 2002, he founded USEMLAB, an economics and markets blog, and in 2008 an independent publishing house that has published many economic books, including the Italian version of the best-seller *The Bitcoin Standard* by Saifedean Ammous. Most recently, at the end of 2022, he published the 10th book of the collection: *Bitcoin Village* by Valerio Dalla Costa.

Since 2016, Francesco has hosted the successful podcast *Il Truffone*, which covers topics such as money, financial and economic education, investing and finance, social dynamics and Bitcoin. The podcast has reached well over 220 episodes.

FOREWORD TO THE ENGLISH EDITION

What is Bitcoin? The right answer is there is no easy answer.

Bitcoin is too many things to be defined in a single expression. When friends and relatives ask us to explain what Bitcoin is, we could use multiple approaches. We may talk about a savings technology, digital gold, Internet-native currency, e-cash, freedom money, separation between money and state, separation between money and central banks, individual freedom, free market money, rules without rulers, financial emancipation for minorities and for the second and third world, social justice against the Cantillon effect, power grid optimisation. And these are just a few of them.

Answering the question 'What is Bitcoin?' is a task of rare difficulty. The risk is to slip into insignificance by giving reductive definitions that do not arouse sufficient interest, or to get lost among the thousands of ramifications the revolutionary protocol discovered by Satoshi Nakamoto implies, thus confusing our audience.

Bitcoin is a complex phenomenon that can be analyzed from multiple perspectives, including technical, economic, financial, sociological, energetic, and political. However, by studying only one or a few of these perspectives, we will never be able to fully grasp its historical significance and the numerous possible implications. To do so it is necessary to have

at least a superficial understanding of all the aspects that Bitcoin encompasses. This is precisely what Valerio's offers in his book Bitcoin Village – The Dawn of a New Society Based on Sound Money. In just a few hundred pages, he provides an invaluable opportunity to achieve what would otherwise require extensive research across multiple sources, making it an invaluable resource for anyone interested in Bitcoin.

The ability to connect the dots is crucial in understanding the underlying reasons behind seemingly unrelated events and historical changes. How is it possible for banks, already heavily regulated, to fail? Why are the central banks' hands tied? Why do new generations save less than past ones? Why is it that – despite technological progress – inequality increases? In short: what incentives are moving the world forward? The answers to these questions and many others lies in the nature of money, the global circulatory system of society.

In the first part of the book, Valerio explains the origins of money and illustrates its evolution over the centuries. Then he shows the needs and incentives that led to the discovery of Bitcoin. The second part is dedicated to the technical explanation of how the Bitcoin protocol works. Finally, the third and final part is a journey through the sociological, philosophical, economic and political reflections implied by the gradual adoption of the technology.

On January 3rd, 2009, the day Bitcoin was born, the final piece of the puzzle fell into place, heralding the dawn of a new era with clear and distinct features. An era that the authors of The Sovereign Individual would define 'The Information Age'. In this book, Valerio gives an insight into how Bitcoin may shape the world for generations to come.

Federico Rivi²
March 2023

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² Federico Rivi is a Bitcoin journalist and educator. He worked for five years in leading Italian mainstream media and then worked in media relations in a financial holding company. In 2021 he started *Bitcoin Train*, a Bitcoin-only journalistic project in the form of a newsletter. With over 90 in-depth articles under its belt, *Bitcoin Train* is an editorial product intended as a journey down the Bitcoin rabbit hole. From the basics of the early articles it gets to discover the deeper implications of the technology discovered by Satoshi Nakamoto.

Today Federico is also a contributor to *Bitcoin Magazine*, the world's leading Bitcoin news outlet. He is also part of the Italian *BTCPay Server* community: he helps merchants and businesses who want to start accepting bitcoin as a form of payment.

PREFACE

HOW MAGIC IS BORN

March 29, 2014.

I perfectly remember the first time I heard about Bitcoin in my life. I was in a farmhouse in the woods in Vallecamonica, in the province of Brescia, which I had rented for a weekend. There were many friends with me, invited to celebrate my fresh degree, obtained a few days earlier. Between barbecues, aperitifs, music, and chats, I heard the term *Bitcoin* mentioned for the first time by a friend of mine. Which immediately intrigued me a lot. Bitcoin... *Bitcoin?* Bitcoin.

A native digital internet currency? Untied from the current economic and financial system? Able to run on its own?

Sounds good! Bitcoin...

I had long been very critical about functioning of the euro system and in general of fiat money, managed in monopoly and legal tender by central banks. Themes on which I had informed myself – out of mere curiosity – in previous years.

A new global digital currency, then? With the potential to protect savers from inflation and protect privacy? Decentralized and based on a network that does not require any trust in an intermediary?

The idea was undoubtedly stimulating but at the time I didn't go into it too much also because, at the time, there was practically nothing in terms of information content, especially in Italy.

Only a few months passed when I came across a video on the web of an entrepreneur who, in about a quarter of an hour, presented the Bitcoin phenomenon in broad terms.

Good heavens!

It was love at first sight.

«But will this stuff really work?» The disbelief of the case, seasoned with a good dose of initial skepticism, was soon supplanted by so much wonder, starting a period of mad and desperate study (so to speak) to search for sources, texts, blogs, and every type of website. Anything that could provide me with further details and information on the subject was invaluable in satisfying my curiosity.

There weren't many Italian websites at the time. Few, some well-done (and which I will thank forever), others less useful or incomplete, if not misleading. My research led me to inform myself therefore also and above all through bloggers and foreign websites, from all over the world.

I quickly learned to download my first *Bitcoin wallet* and to subscribe to an *exchange* (trading platform), thus trying to buy some change. In a short time, I understood how to best buy and manage my first bitcoins. A process that still lasts, in a constantly evolving world, as complex as it is fascinating.

But above all I still remember – as if it were yesterday – the amazement and emotion I felt in seeing them credited to my first personal Bitcoin wallet. These sensations still occur today, every time I receive or send funds in bitcoin.

Yes, because then as of now I consider the phenomenon much bigger than a simple computer protocol, a global network, or an electronic currency (know that Bitcoin is all three things at the same time).

Bitcoin is a formidable and unexpected tool of freedom.

A new paradigm, completely independent and disconnected from the current economic, financial, social, and political system. A sort of parallel universe, in its own right, where a new lifestyle is shown to be possible. They are new glasses with which to observe, from a new point of view,

PREFACE

the reality we live in, society, working dynamics, and relationships between people. Everything.

Bitcoin embraces every aspect of our lives. It forces us to question everything that seems self-evident to us today. Starting from the concept of money, privacy, individual freedom, the importance and management of one's time, one's savings, and one's work. Of one's entire life.

Bitcoin has opened Pandora's box. It has opened up endless opportunities and stimulated endless creativity, projects and ideas. With the discovery of Bitcoin, everything else suddenly became little or not interesting at all.

After years of study and insights – and just as many to come – I have found a single word capable of summarizing and describing what Bitcoin represents, at least for me.

Bitcoin is happiness.

Enjoy the reading.

Valerio Dalla Costa July 2022

INTRODUCTION

Understanding Bitcoin is extremely difficult.

Everything new, in reality, is never initially easy to understand and assimilate. With this technology, in some ways, this aspect is even more accentuated.

First of all, for the first time, it intersects areas that, until now, had remained substantially unrelated and independent of each other. Until the invention of Bitcoin, these issues were like watertight compartments, isolated, in their own right, within the competence of specialized professionals but this new system has intersected and united them, giving life to a decentralized IT protocol that implements electronic money.

There are basically four main areas that Bitcoin merges together: cryptography, the study of distributed information systems (computer networks), game theory, and monetary and economic theories. Let's describe them briefly, to better understand what we are talking about.

1. Cryptography

As the name indicates (from the Greek *kryptós* "hidden" and *graphía* "writing"), cryptography is a discipline that aims to hide the content of a message. It is a set of techniques that make it possible to transmit a message while keeping it secret from everyone, except the people who possess the keys to decrypt it.

Cryptography refers to an ancient discipline already in use by the Greeks and Romans, as evidenced by, for example, around 120 AD, Suetonius in his work *De Vita Caesarum*. The historian recounts that Julius Caesar used to use encryption codes to transmit his communications while maintaining confidentiality towards his messengers. It consisted of combining the letters of the alphabet, replacing them with other letters according to a precise logic: in doing so, the text of the message was completely meaningless in the eyes of those who wanted to interpret it but not for the recipient, who was aware of the key to deciphering that content. In this way, it was possible to maintain the confidentiality of the information.

This trivial example naturally concerns a primordial and easily unbreakable cryptographic technique but it already contained the two fundamental elements of an encryption code:

- 1. *the algorithm*, i.e., the rule with which the original message is modified, making it encrypted (or ciphered);
- 2. *the key*, i.e., the parameter that allows the message to be decrypted (or deciphered).

With the development of information technology and calculation processors, cryptography has undergone great developments, in particular, applied to the field of computer security and in all cases where data confidentiality is required. For example, we find it today in messages and files on storage media, in login procedures for accessing a site or platform (to encrypt the user's password), in financial-banking transactions (home-banking), or in wireless communications (Wi-Fi and cellular networks).

Bitcoin uses asymmetric cryptography, also called *public key* cryptography, which uses different keys to encrypt and decrypt a message. There is a key to encrypt (the public key, which anyone can see) and one to decrypt (the private key, which only the recipient knows) without the need to exchange this sentence between sender and receiver.

In reality, we will see that Bitcoin does not use this technology to encrypt but to sign and verify signatures, using it in reverse: the private key held by the sender is used to sign the message, while the public key is used to verify the signatures.

Cryptography is a truly fascinating and still evolving discipline. The term "cryptocurrency" should refer precisely to the fact that the bitcoin currency is based on some cryptographic primitives.

2. Study of Distributed Computer Systems

In computer science, when we speak of *computer networking*, we mean the set of telecommunications networks characterized by a set of hardware devices: in a nutshell, distributed computer systems.

With the advent of the global Internet, the World Wide Web quickly became the dominant type of computer network, enabling people around the world to use the network for e-commerce, interactive applications, computing platforms, telephony, e-mail, and more. Consequently, the study of computer networks is now practically synonymous with the study of the Internet and its applications, having actually supplanted computer architectures and protocols that are no longer relevant.

As a native digital currency of the Internet, in order to appreciate some of its dynamics, Bitcoin, therefore, requires some basic knowledge in this field as well.

3. Game Theory

The origins of game theory can be traced back to 1654 and Blaise Pascal and Pierre de Fermat with their analysis of the calculation of probabilities in gambling. The theory in its current form is attributed to John von Neumann and Oskar Morgenstern with the publication of the *Theory of games and economic behavior* in 1944, as well as to the contributions of prominent scholars such as John Nash, Nobel Prize in Economics for his research in this field, to which the successful film *A Beautiful Mind* was also dedicated.

Game theory refers to a mathematical method that allows us to study human behavior in situations of strategic interaction, aimed at the gain of each individual. It is a discipline that analyzes the interaction between individuals and their decision-making process in a specific context, through a mathematical representation of human behavior in special circumstances, in which certain incentives and conditions can lead to predictable results on the part of the players.

Typically, within a game we can find three fundamental elements:

- *Players:* they are the ones who make the decisions. In essence, we mean the participants.
- *Strategies:* these are the actions that the players are allowed to perform, taking into consideration all the possible choices made by the other participants.

• Results: they are the result of the strategies chosen by the various players. The results can be predicted on a mathematical basis according to the logic of incentive mechanisms.

One of the most famous applications of game theory is the so-called *prisoner's dilemma*, where the mathematical and rational results that emerge in the outcomes can sometimes be counterintuitive.

However, this discipline does not apply only to abstract concepts. The game theory allows large companies, for example, to make strategic and economic decisions based on the possible actions of market competitors.

Or it can equally well describe the so-called "arms race" in the 1950s by the United States and the USSR during the Cold War. In this case, the players would be the world's economic powers and the strategies would be the "arm" or "disarm" options. Game theory easily explains how, for both nations, resorting to armaments was the dominant strategy, although the final result was not optimal for either of the two participants.

For the dynamics of Bitcoin, game theory plays a vital role. It is one of the reasons why the system can stand and develop in a decentralized way, without the presence of a central coordinator. This takes place through an incentive mechanism capable of keeping the network safe and sustainable, where on the one hand honest actors are rewarded, and on the other hand, dishonest behavior, aimed at damaging the system itself, is made increasingly difficult and inconvenient by the economic point of view.

4. Monetary and Economic Theory

Bitcoin is an electronic currency. It, therefore, becomes essential to have a minimum of smattering also on the operating principles of the economy and finance. To understand the scope of this technology, knowing at least the main past and present theories, and having a general idea of how the current banking and credit system works, is essential. In any case, these are very complex topics, where the literature is endless and where the dominant economic theories are very broad and often conflict with each other.

In particular, it becomes essential to understand what money actually is, as well as the central role that this instrument has – and has always had – within the civilizations of every era. A topic still deeply unknown and undervalued today but which Bitcoin has finally been forced to

question again, demonstrating how the form of money adopted constitutes, in fact, the foundations on which any society is based.

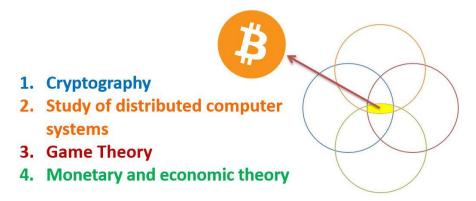


Figure 1. Bitcoin sits at the crossroads of four major subject areas.

These four areas represent – we could say – the backbone of the technology. Bitcoin is probably difficult to understand and interpret also for this reason: very few people in the world can boast of having in-depth knowledge and skills in each of these four areas. Most people can be experts and specialists on one of these topics. At least maybe two. But since they know next to nothing about other fields, industry experts often fail to fully grasp the extent of the phenomenon they are observing, as their perspective is limited to only a narrow point of view.

To give some examples, there are great experts and luminaries of economics and politics in the world, who however know little or nothing about cryptography and distributed computer networks: many of them, therefore, struggle to grasp the essence of Bitcoin and to understand its decentralized functioning and of the strict rules of its computer protocol. Or, most programmers, even if they are experts in writing software, generally show little or no awareness of economic and monetary theories. While correctly interpreting the technological part of Bitcoin, they often fail to appreciate its enormous potential from a social, political, and philosophical point of view.

In short, to understand at least the essence of what has been happening in recent years, it is necessary to have an overview, making an effort to consider all the different areas at stake at the same time. Only in this way does it appear truly possible to grasp the novelties, appreciate

the value of this revolutionary technology and understand its enormous potential.

Given the infinity of necessary information and the complexity of all the issues that Bitcoin touches (practically all those inherent to our private and social sphere), it is however very difficult to be able to summarize everything in a few lines of informative text. Indeed, to tell the truth, it appears precisely as an impossible undertaking. The theme is completely new, very complex, too vast, and infinitely broad. A bottomless pit, a sort of vortex from which, once entered, it is no longer possible to get out. Where the more we inform ourselves, the more we realize how little we know and how much more we should know.

PURPOSE

The discovery of Bitcoin represents the beginning of a real individual training journey. For many, Bitcoin is discovered in small steps: at the beginning, perhaps it is seen in a bad light, or it is not taken seriously, seeing it as a leisure, a pastime, a toy for speculators. Then slowly one realizes that there is something much deeper that is hidden, silent, behind this innovation.

In any case, this training path has to start somewhere. The idea of this book was born with this in mind: to try to offer readers a general introduction to the Bitcoin universe, trying to help people understand this technology destined to revolutionize our society.

In these years of study, certainly, the most important tool that has contributed to the formation of the author has come from reading books. Indeed, reading forces people to stop and take the time to reflect. It forces us to be an active part of the lines that are before our eyes. It forces the reader to set reasoning in motion, raise new doubts, imagine new solutions, and develop healthy critical thinking, which is exactly what it takes to fully grasp this new technology.

This informative text was therefore born with the idea of providing an overall and as complete as possible picture of this fascinating innovation. The intent is to try to embrace all the main aspects that Bitcoin touches to try to provide a general framework – as logical and coherent as possible – from which to start one's individual training path, with the hope of triggering interest and debate around the epochal change we have been witnessing for years.

INTRODUCTION

Especially when the idea of a *Bitcoin Village* was born: an education center located in Brescia and Bergamo valleys where people can approach and "touch" a revolution that is still largely underestimated. The purpose of a physical point focused on a digital currency like bitcoin is to meet people and businesses to share with them the continuous wonder that this technology radiates every day and that will profoundly change our lives.

STRUCTURE, RECIPIENTS AND REQUIREMENTS

The book is structured in three distinct parts – the narrative part, the technical part, and the analytical/reflective part – designed to be quite independent of each other. This means that they could also be considered separately, without affecting too much the general understanding of the text.

PART 1. A GLANCE AT THE PAST

In this part, mainly narrative, we retrace the role that money has played in human history, up to the current fiat money system. After that, we tell the story of how the Bitcoin technology originated: the motivations, the first experiments, the technological problems that had to be faced, the launch of the network, and the first years of its development. A sort of historical chronicle with facts, characters, and events that led to the birth of the phenomenon we know today.

PART 2. AT THE HEART OF DIGITAL GOLD

In the second part, more properly technical, we go on to explore the general functioning of the Bitcoin ecosystem, illustrating the underlying technologies. The dynamics of the blockchain, the proof-of-work algorithm, and the importance of the mining activity are examined, illustrating how transactions can take place within a decentralized and disintermediated system, without the network participants having to provide sensitive data or place trust in a central body.

The concept of a bitcoin wallet is then addressed, which is essential for users to store and manage their funds independently. Finally, to conclude with some future dynamics and possible technological developments on which development has been focusing in recent years. Among all, the Lightning Network protocol is designed to solve the age-old problem of scalability and to optimize exchanges in everyday life.

PART 3. THOUGHTS FROM THE VILLAGE

In the last part, more analytical and reflective, some aspects of this technology are considered, which are believed to have decisive impacts on the evolution of our society. Starting from the analysis of the characteristics of a good currency, moving on to considering how major changes are perceived in the eyes of people, focusing on the concept of the value and the dynamics related to the price of bitcoin over time.

Reflections are then made on the consequences of the adoption of technology in the context of social relationships and the behavior of individuals but also on increasingly topical issues such as privacy, environmental protection, wars, or the tax issue. Finally, we try to answer some typical questions that can arise in a person who is faced with new situations never experienced before.

Everything is aimed at describing and imagining the social, political, and philosophical impacts that Bitcoin is bringing to all areas of our society.

The book is mainly informative, designed both for people who are approaching this new world for the first time, looking for a starting point from which to get informed and for all those interested in deepening and exploring the Bitcoin theme in its many facets.

The bibliography lists some of the texts, sources, and information material that are considered relevant and significant for further study of all the areas covered or mentioned only marginally.

The requirements necessary to approach this text concern, above all, the interest and curiosity in wanting to explore new concepts and new dynamics. But curiosity alone is probably not enough. Above all, it seems necessary to have patience and a certain degree of open-mindedness: it is only by calling into question what we take for granted today and consider it "obvious," combined with a healthy critical spirit and a proactive attitude towards change, that it is possible to fully understand the essence of the Bitcoin revolution.

PART 1 A GLANCE AT THE PAST

Chapter 1

MONEY IN HISTORY

Among the various aspects that Bitcoin forces us to review and question again, there is, first of all, the question of what money actually is.

Yes, currency, money, or whatever you want to call them. The ones we use every day, the ones we constantly exchange with other people, the ones we try to earn (and in ever greater quantities) during our lives. Those that are often seen as something negative, linked to episodes of corruption, to emotions such as people's greed, to selfishness, or simply too little-appreciated behaviors (you know when they accuse us of being "too attached to money"?). In short, our whole life, our work, and our time are closely linked to the money instrument.

So, why invent a new currency? Few feel the need to adopt an alternative completely disconnected from the current economic and financial system.

To better understand this new phenomenon, we must inevitably start from the concept of money, opening a parenthesis – not too short but necessary – on the role that this has had in human history, starting from its origins and primitive civilizations. We are talking about an instrument that boasts a millenary evolution in the history of man: there are even

some sources that demonstrate how the invention of money precedes or coincides with the invention of writing.

First, it should be noted that money is nothing more than *technology*. A tool researched and invented by man for a precise objective: to facilitate cooperation within any socio-economic context. Just as the discovery of language – allowing individuals to communicate easily with each other to aggregate and organize themselves into villages – determined the turning point in the evolution of civilizations; so too money – by allowing individuals to communicate *value* – has always had a crucial impact on the cooperation and trade necessary to create prosperous and lasting societies.

Money is therefore a tool invented by man and only by man. In particular, it is basically nothing more than a kind of *social convention*. What particularly characterizes it is acceptability, i.e., the fact that individuals within a certain village are willing to work or sell goods and services in exchange for a certain object accepted by convention.

The curious thing is that this object used as a means of exchange does not have a particular intrinsic value for direct use. It takes on value only as a result of an implicit agreement that emerges in society, which is self-perpetuating and strengthened over time. The value of money therefore substantially depends on the *expectation* about the choices of the other members of the community: the more an individual expects an object to be accepted as a means of exchange, the more likely it is that he will accept it in exchange for goods or services.

Precisely because it is the product of social relations, money has historically allowed easy access to water, food, care, sustenance, the construction of shelters, and hunting tools. Through this tool, it has been possible to optimize the exchange of products and services between people who do not know each other and who are outside the small circle of acquaintances.

In fact, money must allow individuals to be able to specialize in certain, increasingly specific skills. Let's try to imagine if we had to personally take care of obtaining food every day by looking for some wild animal but also of fetching water from a well in the center of the village every day, recovering the materials needed to build a shelter in the forest, to acquire knowledge and techniques to build a hut, to study to understand how to light a fire and cook.

Exchanging food, goods and services was essential to survive already in the times of primitive men and a necessity inherent in the perspective of cooperation to safeguard us as a species. Without the instrument of currency, capable of facilitating exchanges with one's fellow humans, our chances of survival would be drastically reduced.

Money, therefore, presents itself as an indispensable tool for optimizing trade and thus creating well-being and prosperity, extending the benefits of progress to other individuals as well. In other words, it serves to facilitate the diffusion of knowledge, skills, and culture in ever more extensive areas and borders. For any village or society that wants to evolve, grow or prosper over time and space, money is configured – ultimately – as the basic and founding tool.

As a technological tool, money must in particular essentially fulfill three functions:

- 1. Store of value. This function means the ability to maintain value over time. Similarly to a battery which is all the more suitable the more it manages to keep the accumulated electric charge without discharging over time, a good form of money is more suitable the more it manages to guarantee that the stored value does not decrease over time. When we speak of "safe haven" we mean precisely its characteristic of knowing how to preserve its value over the years, without losing its purchasing power.
- 2. *Medium of exchange*. The monetary instrument should be functional to exchange, both in time and in space. To best fulfill this function it should, for example, prove easy to transport, practical to divide into smaller fractions, it should be fungible, as well as simple to verify for anyone who accepts it as payment.
- 3. Unit of account. A currency adopted by society becomes a unit of account when the value of all goods and services is measured against this form of money. Nowadays, the function of the world unit of account is covered by the US dollar: all raw materials, basic necessities, or the price of bitcoin itself are measured starting from the dollar, precisely because it is today recognized as a unit of account.

So, let's try to schematize the millenary history of the coin, from its origins to the present day. Difficult undertaking, if not impossible, to cover in a few lines. In any case, there is no claim to be exhaustive: the intent is rather to offer a general smattering on the subject in order to be able to grasp the reasons for this new, fascinating novelty called Bitcoin.